AMENDMENTS TO THE CLAIMS

1-6. (Canceled)

7. (Currently Amended) An obstacle detection device to be mounted on a vehicle for detecting and displaying an obstacle in a vicinity of the vehicle, the device comprising:

an obstacle detection section for emitting beams having a predetermined divergence angle consecutively in a plurality of different directions, and for each direction, receiving a reflected wave from an obstacle and detecting the obstacle existing within an emission angle range of the beam for the direction;

a distance calculation section for calculating, for each direction, a distance representative of an interspace between the obstacle and the vehicle based on a received signal of the reflected wave;

an obstacle image creation section for creating, for each direction, an obstacle image as a figure two-dimensionally developed in the emission angle range of the corresponding beam while treating, as a basis for image creation, the distance calculated by the distance calculation section for the direction, and for creating and outputting image data for displaying the obstacle image; and

a display section for receiving the image data created by the obstacle image creation section and displaying an image showing a positional relationship between the obstacle and the vehicle,

wherein, for each direction, the obstacle image created by the obstacle image creation section is an arc figure whose center is an emission point of the beams and whose radius is the

distance calculated by the distance calculation section for the direction, and

~~The obstacle detection device according to claim 6,~~ wherein, for each direction, the obstacle image creation section changes a thickness of the arc figure as the obstacle image ~~created for each direction~~, in accordance with the distance calculated by the distance calculation section for the direction.

8. (Canceled)

9. (Currently Amended) An obstacle detection device to be mounted on a vehicle for detecting and displaying an obstacle in a vicinity of the vehicle, the device comprising:

an obstacle detection section for emitting beams having a predetermined divergence angle consecutively in a plurality of different directions, and for each direction, receiving a reflected wave from an obstacle and detecting the obstacle existing within an emission angle range of the beam for the direction;

a distance calculation section for calculating, for each direction, a distance representative of an interspace between the obstacle and the vehicle based on a received signal of the reflected wave;

an obstacle image creation section for creating, for each direction, an obstacle image as a figure two-dimensionally developed in the emission angle range of the corresponding beam while treating, as a basis for image creation, the distance calculated by the distance calculation section for the direction, and for creating and outputting image data for displaying the obstacle

image; and

a display section for receiving the image data created by the obstacle image creation section and displaying an image showing a positional relationship between the obstacle and the vehicle,

wherein, for each direction, the obstacle image created by the obstacle image creation section is a figure having an area and at least containing an arc figure whose center is an emission point of the beams and whose radius is the distance calculated by the distance calculation section for the direction, and

~~The obstacle detection device according to claim 8,~~ wherein, for each direction, the obstacle image created by the obstacle image creation section is an elliptical figure, end points of whose major axis coincide with end points of the arc locus.

10. (Canceled)

11. (Currently Amended) An obstacle detection device to be mounted on a vehicle for detecting and displaying an obstacle in a vicinity of the vehicle, the device comprising:

an obstacle detection section for emitting beams having a predetermined divergence angle consecutively in a plurality of different directions, and for each direction, receiving a reflected wave from an obstacle and detecting the obstacle existing within an emission angle range of the beam for the direction;

a distance calculation section for calculating, for each direction, a distance representative

of an interspace between the obstacle and the vehicle based on a received signal of the reflected wave;

an obstacle image creation section for creating, for each direction, an obstacle image as a figure two-dimensionally developed in the emission angle range of the corresponding beam while treating, as a basis for image creation, the distance calculated by the distance calculation section for the direction, and for creating and outputting image data for displaying the obstacle image; and

a display section for receiving the image data created by the obstacle image creation section and displaying an image showing a positional relationship between the obstacle and the vehicle;

wherein, for each direction, the obstacle image created by the obstacle image creation section is a figure having an area and at least containing an arc figure whose center is an emission point of the beams and whose radius is the distance calculated by the distance calculation section for the direction;

~~The obstacle detection device according to claim 8,~~

wherein, while treating as a base figure the figure having an area created for each direction, the obstacle image creation section further determines as the obstacle image an entire figure obtained by joining all base figures in order of direction with line segments joining end points on one side of the arc loci contained in the base figures ~~in mutually adjacent directions~~ and with line segments joining end points on the other side of the arc loci contained in the base figures; and

wherein an inside of the entire figure is divided into parts based on ~~the~~ a distance from the emission point of the ~~beam~~ beams, and the image data is created such that ~~brightness of~~ adjacent parts obtained by the division ~~is~~ have a gradual ~~gradually changed~~ difference in brightness.

12. (Currently Amended) An obstacle detection device to be mounted on a vehicle for detecting and displaying an obstacle in a vicinity of the vehicle, the device comprising:

an obstacle detection section for emitting beams having a predetermined divergence angle consecutively in a plurality of different directions, and for each direction, receiving a reflected wave from an obstacle and detecting the obstacle existing within an emission angle range of the beam for the direction;

a distance calculation section for calculating, for each direction, a distance representative of an interspace between the obstacle and the vehicle based on a received signal of the reflected wave;

an obstacle image creation section for creating, for each direction, an obstacle image as a figure two-dimensionally developed in the emission angle range of the corresponding beam while treating, as a basis for image creation, the distance calculated by the distance calculation section for the direction, and for creating and outputting image data for displaying the obstacle image; and

a display section for receiving the image data created by the obstacle image creation section and displaying an image showing a positional relationship between the obstacle and the

vehicle,

wherein, for each direction, the obstacle image created by the obstacle image creation section is an arc figure whose center is an emission point of the beams and whose radius is the distance calculated by the distance calculation section for the direction,

~~The obstacle detection device according to claim 6,~~ wherein, for each direction, the obstacle image creation section further treats, as a representative location of the obstacle ~~for each direction~~, a point apart from the emission point of the ~~beam~~ beams by the distance calculated by the distance calculation section for the direction, the point being in a central direction of the emission angle range of the beam emitted in the direction, and

wherein the obstacle image creation section further creates image data of a kinked line joining the ~~reference~~ representative locations in order of direction.